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MANUFACTURES.

No. I.

SILK GROWN IN ENGLAND.

The Thanks of the Society were voted to W. FELKIN, Esq. of Nottingham, for his Communication on Silk grown in England, accompanied by Specimens of Cocoons, which have been placed in the Society's Repository.

On the 10th September, 1839, a letter was received from Mr. W. Felkin, offering, for the acceptance of the Society, a sample of English-grown cocoons, on the very twigs on which they were originally spun by the worms. This letter was accompanied by a printed statement, the substance of an address, describing an experiment on the growth of silk at Nottingham, made that year, and delivered in the Section of Natural History at the late meeting of the British Association at Birmingham.

The place where the experiment was carried on was a warehouse in the middle of the town of Nottingham; the worms were hatched from eggs procured in Italy, of two varieties, distinguished by the colour of the silk, one being white and the other yellow. The eggs of the worms producing the white silk were hatched in the beginning of May, and, in consequence of the severity

of the weather, were obliged to be fed, during the first fortnight, on lettuce-leaves. The eggs of the worms producing the yellow silk did not hatch till a fortnight after the others, and were fed, from the beginning, on mulberry-leaves. Of the white silk-worms seven-eighths died; of the yellow silk-worms the loss amounted only to forty per cent; the average casualty of the worms in France, under the best management, being about thirty-five per cent. The yellow silk-worms were arranged in two divisions, those in one of which began to spin earlier than the others, were more healthy, and suffered a loss of less than twenty per cent. The weather for the first three weeks of the experiment was dry and cold, for the next fortnight was fine, and for the remainder of the time so very wet that it was not possible at all times to avoid giving the leaves in a heated state. The temperature of the room varied from 55° to 70°.

In Italy the worms begin to spin about six weeks after hatching. In Mr. Felkin's experiments, the yellow silk-worms, which had been fed entirely on mulberry-leaves, began to spin at the end of eight weeks; but the white silk-worms, which, for the first fortnight had been fed on lettuce, did not begin to spin until all the others had finished, and they had not finished till three weeks afterwards—the time from hatching till finishing the cocoons being eleven weeks.

Mr. Felkin's cocoons, on comparison with some recently imported from Italy, presented but little inferiority in compactness and size; for, while of the latter about 250 weighed a pound, of the former 300 weighed a pound. The general conclusion which Mr. Felkin draws from his experiment is, that the growing of silk in England is not likely to be a profitable undertaking.

In order to ascertain how far it is desirable to reel silk in England from cocoons of foreign growth, Mr. Felkin states some particulars respecting an experiment on a very large scale, made by Mr. Heathcoat at Twirton, and superintended by Mr. Felkin.

The cocoons were Florentine, and weighed 35,000 pounds. The quality of the silk was good, and it was made by Mr. Heathcoat into bobbin-net lace. Part of the cocoons were employed in various experiments; the remainder, 28,000 pounds, produced 1850 pounds of reeled silk, but the profit of the undertaking was not such as to induce a repetition of it. It was also found that the girls employed in reeling suffered much in their health during the process, which is attributed by Mr. Felkin to the great heat of the water necessary to swim the cocoons in, and into which the reelers were, of necessity, continually dipping their fingers.

One girl died; and the others suffered much from rheumatism and abscesses in the fingers and arms.

Besides the results of Mr. Felkin's own personal experience above described, his communication contains many very valuable facts respecting the growth of silk in Europe, as well as suggestions for improving the growth of silk in British India.